**PLANNING A COMPLEX ALGORITHM**

**DESIGN THE ROUTINE**

CHECK PREREQUISITES

Define the problem

*Our Sprites are based on the default sprites.*

Information the routine will hide

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Inputs to the routine

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Outputs from the routine

*Different Sprites will be displayed*

Pre-conditions

*The canvas loads correctly and is ready to display sprites.*

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Post-conditions

*Sprites will display on the canvas in the correct location*

Name the Routine

*Adjusting sprite themes*

Decide how to test the routine

*It can be tested by creating visual checks on the canvas to see whether the sprites have been adjusted*

Research functionality available in standard libraries

*The ability to load images and sprites into the program has already been implemented. Png will have to be used as it supports transparency.*

Think about error handling

*Generally, with this iteration, errors are able to be identified and fixed as they will not be visible on the canvas directly.*

Think about efficiency

*Using smaller images and compression will allow the canvas to load faster in the event of the game going online*

Research algorithms & data types

Images can be stored as variables.

**WRITE PSEUDOCODE**

1. Think about the data
2. Check the pseudocode
3. Try ideas in pseudocode

**CODE THE ROUTINE**

1. Write the declaration
2. Turn pseudocode into comments
3. Fill in code below comments
4. Check if code can be factored

**CHECK THE CODE**

1. Mentally check for errors
2. Step through in Debugger
3. Test the code
4. Remove errors in the code
5. Clean up